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| EXAMINER |
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DSOUZA, JOSEPH FRANCIS A

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| ART UNIT | PAPER NUMBER |
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2611

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/612,897

Applicant(s)

BAHRENBURG ET AL.

Examiner

Adolf DSouza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9 - 11, 14 is/are rejected.
- 7) ☒ Claim(s) 5 - 8, 12- 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/23/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

***Specification***

2. The disclosure is objected to because of the following informalities: The heading "SUMMARY OF THE INVENTION" appears twice (pages 7 and 11).

Appropriate correction is required.

***Claim Objections***

3. Claims 2, 3 are objected to because of the following informalities:
  - In claim 2, line 2, "broadcast channel said mobile stations" should be changed to "broadcast channel to said mobile stations".
  - In claim 3, 3<sup>rd</sup> line, the meaning of the phrase "and an opposite operation" is unclear.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over TSG-RAN Working Group 1 meeting #12 (Random Access Procedures For Low Chip Rate TDD Option; April 10 – 13, 2000; Seoul, Korea; which has been provided by the Applicant in his IDS and is hereafter referred to as TSG-RAN WG 1) in view of Gilhousen et al. (US 5,103,459).

Regarding claim 1, TSG-RAN WG 1 discloses a method for scheduling an access channel in a cellular telephony system, the system adopting a two step procedure for managing the mobile stations' network access (2<sup>nd</sup> page, 1<sup>st</sup> paragraph – 3<sup>rd</sup> paragraph; wherein the 1<sup>st</sup> step is the UE determining the timing and TX power level [1<sup>st</sup> paragraph] and the second step is the UE adjusting it's timing and power level after receiving the acknowledgement from Node B [3<sup>rd</sup> paragraph]), comprising the steps of:

selecting a signature burst from a plurality of orthogonal coding sequences (1<sup>st</sup> page, section 10.7.1, 1<sup>st</sup> paragraph; wherein selecting the signature burst from the orthogonal

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coding sequences is done by selecting the 8 SYNC1 code (signatures) from the total of 256 SYNC1 codes);

transmitting said signature burst from said mobile station to said network, said transmission occurring over a first configured physical channel (1<sup>st</sup> page, section 10.7.2, 1<sup>st</sup> paragraph; wherein the signature burst is one of the 1- 8 possible signatures and the first configured physical channel is the UpPTS channel);

pausing for a select time interval (2<sup>nd</sup> page, 2<sup>nd</sup> paragraph; wherein pausing for a select time interval is interpreted as the UE waiting for a response from Node B);

after said step of pausing, transmitting an acknowledgement message from said network to said mobile station, said message being transmitted over a second configured physical channel, said second channel being one of directly and indirectly correlated to said first channel (2<sup>nd</sup> page, 2<sup>nd</sup> paragraph; wherein the acknowledgement sent from the network station to the base station is the acknowledgement from Node B to the UE and the second channel is the P-FACH channel);

transmitting to said network from said mobile station an access request message on a third configured physical channel, said third configured channel being one of directly and indirectly correlated to at least one of said second and first channels (2<sup>nd</sup> page, 3<sup>rd</sup> paragraph; wherein the third physical channel is the P-RACH channel and the access request message is the information sent from the UE to Node B);

assigning a set of signatures and an acknowledgement message into a cell (2<sup>nd</sup> page , 2<sup>nd</sup> paragraph; wherein the cell is interpreted as the frames the information is sent to the UE in);

calculating first time intervals at said mobile stations, said first time intervals indicative of when said signature bursts are transmitted (2<sup>nd</sup> page, 1<sup>st</sup> paragraph; wherein the first time intervals are the timing information)

calculating second time intervals at said mobile stations, said second time intervals indicative of a wait for arrival of said acknowledgement message from said network(2<sup>nd</sup> page, 3<sup>rd</sup> paragraph; wherein the second time intervals is the adjusted timing done at the UE);

and minimizing collisions in said third configured physical channels between said access request messages sent from other mobiles stations via said first and second calculated time intervals depending on both a duration of said respective access request messages and delays in issuing said request messages (2<sup>nd</sup> page, section 10.7.3).

TSG-RAN WG 1 does not explicitly disclose CDMA system, orthogonal sequences spread and despread the signal.

In the same field of endeavor, however, Gilhousen discloses said system based on CDMA techniques (column 4, lines 26 – 36) wherein individual coding sequences are substantially orthogonal to one another (Abstract, column 4, lines 19 – 24, 37 – 45) and

are respectively assigned to the mobile stations for spread-spectrum modulating a common carrier in uplink (Fig. 4a, elements 196, 198, 200, 214, 232; Fig. 4b elements 202, 204 upto 268, 270; column 17, line 49 – column 18, line 27; wherein the spread spectrum modulation is done by the PN sequences) and de-spreading demodulating the downlink carrier , in order to make them distinguishable at the air interface (Fig. 3, column 15, line 58 – column 16, line 26).

Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the method, as taught by Gilhousen, in the system of TSG-RAN WG 1 because this would allow mutual interference between users to be reduced, as disclosed by Gilhousen.

Regarding claim 2, TSG-RAN WG 1 discloses broadcasting, by said network, system information in a broadcast channel to said mobile stations (2<sup>nd</sup> page, 2<sup>nd</sup> paragraph), said system information comprising at least one part of a plurality of access parameters, said access parameters comprising values of said first time intervals for said mobile stations transmitting their signature bursts (2<sup>nd</sup> page, 2<sup>nd</sup> paragraphs; wherein the time intervals is the timing adjustment sent from Node B to the UE), values of said delays for issuing said access request messages, and durations of said access request messages (2<sup>nd</sup> page, 2<sup>nd</sup> paragraphs; wherein the delay an duration sent from Node B to the UE is the relative frame number [number of frames passed]);

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receiving said system information at said mobile stations; and decoding, at said mobile stations, access parameter values associated with said mobile stations (2<sup>nd</sup> page, 3<sup>rd</sup> paragraph).

6. Claims 3, 4, 9, 10, 11, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over TSG-RAN Working Group 1 meeting #12 (Random Access Procedures For Low Chip Rate TDD Option; April 10 – 13, 2000; Seoul, Korea; which has been provided by the Applicant in his IDS and is hereafter referred to as TSG-RAN WG 1) in view of Gilhousen et al. (US 5,103,459) and further in view of Raith et al. (US 5,603,081).

Regarding claim 3, TSG-RAN WG 1 discloses synchronizing said mobile stations such that respective signature bursts and positions of uplink pilot time slots carrying them (page 1, section 10.7.2), associations between signature bursts and position of said second configured physical channels carrying said acknowledge messages from said network (2<sup>nd</sup> page, 2<sup>nd</sup> paragraph; wherein the second configured physical channel is the P-FACH channel), and wherein said association of a latter channel with position of said third physical channels for sending an access request messages having duration of a sub-frame or integer multiple are known to said mobile stations (2<sup>nd</sup> page, 2<sup>nd</sup> and 3<sup>rd</sup> paragraphs; wherein the sub-frame or integer multiple of sub-frame is the next 4 frames sent through the P-FACH channel).



TSG-RAN WG 1 does disclose assigning carrier to mobile stations, spread spectrum modulation, inserting synchronization burst in pilot tones.

In the same field of endeavor, however, Raith discloses assigning a carrier to said mobile stations (column 9, lines 23 - 37; wherein assigning a carrier to the mobile stations is done by assigning a code channel and spreading it with a PN code);

completing spread spectrum modulation at said mobile stations (column 9, lines 23 - 37; wherein the spread spectrum modulation is done by the PN code) , into a fixed duration of a time slot inserted in a basic sub-frame indefinitely repeated into frames and multiframe (Fig. 8, Slot 1 - 6; wherein slots 1 - 6 form a frame which is repeated; column 17, lines 38 - 45) having embedded physical channels for transporting logical channels (column 7, lines 20 - 40; column 12, lines 24 - 41; column 15, lines 2 - 5) deputed either to traffic or exchange signaling (Fig. 4, Pilot channel, sync channel, Traffic channel; wherein the signaling channel is the pilot and sync channels) in a multilevel protocol conformed to a standardized operative mode (column 26, lines 37, 54; column 28, line 40; column 29, line 63; column 30, line 52);

inserting synchronization bursts into pilot time slots (column 9, lines 38 - 48).

adopting a synchronization procedure of said mobile stations based upon said pilot time slots (column 9, lines 38 - 48).

Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the method, as taught by Raith in the system of TSG-

RAN WG 1 because this would synchronization to be accomplished at the mobile unit, as is well known in the art.

Regarding claim 9, TSG-RAN WG 1 discloses each of said additional sets of mobile stations performs the step of selecting a proper channel for receiving its own system information (1<sup>st</sup> page, last paragraph) and decoding access parameter values (2<sup>nd</sup> page, 3<sup>rd</sup> paragraph; wherein the access parameters are the information associated with the timing and power level).

TSG-RAN WG 1 does disclose the network supports additional protocols and uses logical channels.

In the same field of endeavor, however, Raith discloses assigning a carrier to said network is able to support additional standardized operative modes (column 26, lines 37, 54; column 28, line 40; column 29, line 63; column 30, line 52; wherein the operative modes are the several protocols supported) for servicing a plurality of additional sets of mobile stations sharing subframes, frames and multiframes (Fig. 8; Fig. 6; wherein the subframe are interpreted as the slots and the multiframes are several frames) after access has been completed;

said network broadcasting system information is assigned at operative modes through logical channels (column 7, lines 20 – 40; column 12, lines 24 – 41; column 15, lines 2 – 5).

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Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the method, as taught by Raith in the system of TSG-RAN WG 1 because this would allow several protocols to be sent over logical channels, as disclosed by Raith (column 12, lines 24 – 41).

Claim 4 is similarly analyzed as claim 3.

Claims 10, 11, 14 are similarly analyzed as claim 9.

#### ***Allowable Subject Matter***

7. Claims 5 – 8, 12 – 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

The following patents are cited to further show the state of the art with respect to scheduling an access channel in CDMA systems:

Scholefield et al. (US 5,752,193) discloses a method and apparatus for communicating in a wireless communication system.

Hodzic et al. (US 6,097,707) discloses a Adaptive digital wireless communications network apparatus and process.

Chuah et al. (US 6,115,390) discloses a Bandwidth reservation and collision resolution method for multiple access communication networks where remote hosts send reservation requests to a base station for randomly chosen minislots.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolf DSouza whose telephone number is 571-272-1043. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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